

TE WĀNANGA MĀTAURANGA
O TE AO
INTERNATIONAL ACADEMY OF
EDUCATION

TE WHARE MĀTAURANGA
O TE AO
INTERNATIONAL BUREAU OF
EDUCATION

Te ako
pāngarau
whaihua

*nā Glenda Anthony rāua
ko Margaret Walshaw*



INTERNATIONAL
EDUCATIONAL, SCIENTIFIC AND
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INTERNATIONAL BUREAU
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TE KETE TIKANGA MĀTAURANGA – 19

Te Wānanga Mātauranga o Te Ao

He whare kōrero aromātai, kore whai moni Te Wānanga Mātauranga o Te Ao (IAE), ā, ko tōna kaupapa, he rangahau, he wānanga, he whāki, he whakatinana hoki i te mātauranga. I whakatūria ai i te tau 1986 hei wānanga whakapakari i te mahi rangahau, whakatau i ngā take mātauranga nui puta noa i te ao, whakapai ake hoki i ngā whakawhitinga kōrero i waenganui i te hunga tuhi kaupapa here, i te hunga rangahau, i te hunga mahi anō hoki.

Kei Te Wānanga Ariki mō Te Pūtaiao, Te Kōrero, Te Toi anō hoki i Parahere, Pehiamu te ahurewa ake o te wānanga nei, ko Te Wānanga Takiura o Kūtene i Pēta, Ahitereiria tōna ringa whakahaere.

Ko te whāinga nui o te IAE ko te whakahihiri i te wānanga o te hinengaro i ngā kaupapa mātauranga katoa. Nā whai anō, ka tukuna mai e te wānanga āna kete kōrero i āta rangahau rā e whai pānga ana ki te ao. Ko tāna anō, he arohaehae i ngā mahi rangahau, i ōna pūtakenga mai, i ōna whakatinanatanga hoki hei kaupapa here.

Ko ngā mema o Te Poari Whakahaere o te Wānanga i tēnei wā ko:

- Monique Boekaerts, Te Whare Wānanga o Rītene (University of Leiden), Hōrana (Tumuaki);
- Erik De Corte, Te Whare Wānanga o Ruwene (University of Leuven), Pehiamu (Tumuaki o mua);
- Barry Fraser, Te Wānanga Takiura o Kūtene (Curtin University of Technology), Ahitereiria (Kaiwhakahaere);
- Jere Brophy, Te Whare Wānanga o Te Rohe Mihikane (Michigan State University), Te Hononga o Amerika;
- Erik Hanushek, Te Wānanga o Hūwhare, Taniwhōta (Hoover Institute, Stanford University), Te Hononga o Amerika;
- Maria de Ibarrola, Te Wānanga Kuratini ā-Motu (National Polytechnical Institute), Mehiko;
- Denis Phillips, Te Whare Wānanga o Taniwhōta (Stanford University), Te Hononga o Amerika.

Ki te hia kōrero anō, tirohia te pae tukutuku a IAE i:

<http://www.smec.curtin.edu.au/iae>

Hei mata kōrero

Kua whakaritea tēnei pukapuka mō te whakaako whaihua o te pāngarau hei kaupapa kōrero mō Te Kete Tikanga Mātauranga i whakatipuria ai e Te Wānanga Mātauranga o Te Ao, ā, e tohaina ana e Te Whare Mātauranga o Te Ao me Te Wānanga nei. Ko tētahi o āna kaupapa he whakaputa rangahau whāiti mō ngā kaupapa mātauranga hira nei e pā ana ki te ao whānui. Ko tēnei te pukapuka tekau mā iwa mō ngā tikanga mātauranga hei whakapakari i ngā mahi ako. He hoa pukapuka tēnei nō tētahi o mua, ko te *Whakapakari Ākongā i te Pāngarau* i tuhia e Douglas A. Grouws rāua ko Kristin J. Cebulla. Nā Wayne Ngata tēnei pūrongo i whakamāori.

He whakarāpopotonga tēnei pukapuka i ngā rangahautanga mō Te Kete Raukura (BES) i tuhia e Glenda Anthony rāua ko Margaret Walshaw, hei tikanga whakapakari, whakatipu roa anō i te mātauranga. Kei te kete hoki o te rangi tēnei o ngā rāpopotonga me ētahi atu i www.educationcounts.govt.nz/goto/BES He ohu te tikanga o te tuhituhi i ngā kōrero o Te Kete Raukura (BES) nei, a ngā kaituhi, a ngā rōpū kaiako, a te hunga tumuaki, a ngā kaiako tonu, a ngā wānanga, a ngā kaiwhakarite kaupapa here, a te hunga hoki e kaingākau mai ana. E whai ana ia kōrero o Te Kete Raukura (BES) i ētahi tikanga ārahi a te Tāhuhu o te Mātauranga kia tōtika ai, kia whai hua ai. Kua āta tirohia anō e Ahorangi Paul Cobb te matua o te huinga kōrero kia tika ai.

He ahorangi whaihoa a Glenda rāua ko Margaret i Te Kunenga ki Pūrehuroa. He kaiwhakahaere rāua tahi i Te Whare Rangahau-ā-rangi o Te Mātauranga Pāngarau, nā whai anō he whānui rawa ā rāua kaupapa rangahau e pā ana ki te ako o te ākongā, o te kaiako anō hoki. Ko tā rāua rangahau i tēnei wā tonu nei he whai i ngā tikanga mahi i rō akomanga, i ngā āhuatanga whakawhiti kōrero, i ngā tikanga tatau, i te noho hoki o te kaiako hei ākongā. Nā kua tāia ā rāua rangahau i ngā pukapuka, arā, *Mathematics Education Research Journal, Review of Educational Research, Pedagogies: An International Journal, me Contemporary Issues in Early Childhood*.

Ahako he aha te wānanga, te iwi rānei, me pērā te whakatangatawhenua i ngā tikanga, me noho hoki hei āhuatanga whakamātautau mai. He tikanga tonu te tauira pakirehua o te kete 19 o tēnei Kete Tikanga Mātauranga hei āwhina i ngā kaiako me ngā kaiwhakaako kaiako ki te mirimiri, ki te whakapakari ake anō i ngā take o tēnei whakarāpopotonga mō ngā kāinga ako e mahi nei rātou.

JERE BROPHY,
Te Whare Wānanga o Te Rohe o Michigan,
USA

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Ko ngā kōrero reo Māori a ngā kaiako me ngā ākonga i whakauruhia mai ki roto i te matua o te tuhinga nei, kāore rawa i whakarerekēhia e te kaiwhakamāori, e Wayne Ngata. E noho taketake tonu ana.

Te rārangi take

Te Wānanga Mātauranga o Te Ao	2
Hei mata kōrero	3
Te rārangi take	5
He kupu whakataki	5
1. He tikanga tiaki	7
2. Te whakarite ki te ako	10
3. Kauwhatatia te kauwhata o te ākongā	13
4. Ētahi ngohe pāngarau whaihua	17
5. Ko te tūhonohono	19
6. Te aromatawai hei tikanga ako	21
7. Te whai pūkenga mō te whakawhiti kōrero pāngarau	24
8. Te reo pāngarau	26
9. Ngā tikanga whakamahi me ngā tohu	28
10. Te mōhio o te kaiako	32
Hei whakakapi	35
Ngā whakapuakanga	36
TE WHARE MĀTAURANGA O TE AO – IBE	40

He kupu whakataki

Ko tā te pukapuka nei he āta titiro ki te whakaako pāngarau whaihua nei. Ka whakamāramatia ngā kaupapa ako i runga i te whānui o ngā kōrero rangahau, hei mau ākongā i te kupenga o te ako, e whai hua tika atu ai. Ko te whāinga o tēnei pukapuka he kawē i ngā kaiako, i ngā kaiwhakaako o ngā kaiako, i ngā kaituhi kaupapa here hoki ki te taumata o te tino mōhio, ā, he āwhina hoki i a rātou ki te arotau i ngā huarahi angitū o te pāngarau hei whai mā te ākongā.

Ko te pāngarau te kaupapa ako whānui ake o te ao; ahakoa he aha te take i te noho o te tangata – ā-tapu nei, ā-hapori nei, ā-hapū nei, kei konā te pāngarau e ngau ana. Mā te niho pāngarau e nui atu ai ngā huarahi tangata, o mutukura hoki hei whai mā mātātahi; engari ka aua atu te tokomaha o ngā ākongā e hinga ana i ngā uauatanga o te pāngarau, ā, e pērā tonu ana, he tuki, he hinga, he tuki, he hinga,

tē taea te ueue. Nā reira, me mātua mōhio tātau ki te āhua o te whakaniho, o te whakamana i te ako pāngarau, ā, me mōhio hoki ngā kaiako ki te turaki i ngā taiepa o te uauatangā.

Kāore ngā tikanga o tēnei pukapuka e tū tahanga noa hei tohu mō te pai o te mahi: engari nō roto kē i te pā o te wānanga, te kura, te kāinga, te iwi, te whare whānui o te mātauranga. Tērā e kitea ai e ngā kaiako te pānga nui o ētahi o ngā tikanga nei i ētahi kē atu, ki ō rātau nā takiwā o te ako.

Hui katoa, i tipu mai ngā mātāpono o te pukapuka nei i runga i te whakapono o te kaupapa ako pāngarau:

- kia mau ki te tikanga nui e mea ana kia puare ngā tatau o te whare mātauranga ki ngā ākongā katoa, otirā kei konā kē te kura pāngarau hei whāwhātanga atu;
- e mea ana, ahakoa te pakeke o te ākongā, e taea e te katoa te mauriora o te pāngarau te whakatipu hei mana ākongā nui i te whare pāngarau;
- kia mau ki ngā āhuatanga o roto o te akomanga, kia manaakitia te mana o tētahi e tētahi, ā-tangata nei, ā-iwi nei, ō rātou momo whakaaro, ō rātou nohoanga hoki;
- kia aronui atu ki te whānuitanga o ngā hua o te wānanga, arā, te mārāma ki te kaupapa whakaaro, te tau ki ngā tikanga whakarite, te āhei ki te rautakitaki, te mōhio ki te whakarerekē take;
- kia ū ki te hāpai i ngā hua tikanga ā-iwi nei i roto i te akomanga pāngarau hei āhuatanga whakapakari i te katoa o te ākongā hei tangata marae i te ao.

Ngā whakapuakanga: Anthony & Walshaw, 2007; Martin, 2007; National Research Council, 2001.

1. He tikanga tiaki

Me marae te tiaki o te akomanga i ngā hua o te pāngarau, māna anō e tangata whenua ai te wānanga o te pāngarau ki ngā ākonga.

Tā te rangahau

Ko tā te kaiako pono ki te tiaki i ngā mahi a āna ākonga, he kaha ki te whakapakari akomanga hei wāhi manaaki. Waihoki, ka mea kia pāngarautia te aro o te akomanga, ā, ka mea anō kia paetawhiti te whai a te ākonga me te mau hoki o ngā waewae ki te papa. Ki te pēnei te āhua, ka tahuri te ākonga ki te mahara, ki te whai whakaaro, ki te kōrero, ki te wānanga, ki te aromātai i ngā take pāngarau e kitea ana; nā kua tipu te whare kōrero hei tikanga whakapakari, whakapāngarau hoki i a rātou.

Me tipu kia rea te mana pāngarau o te ākonga

Manaakitia ai te ako o te ākonga, mauritau ai te ako. Mā te manaaki, mā te whakamana anō a te kaiako i ngā momo pāngarau me ngā tikanga o te ākonga ki te akomanga, ka mauritau te ako. Hei tā tētahi kaiako tōtika nei i te akomanga kura matua, “Reo Māori atu ai au ki ngā wāhi e taea ai.” Mā te whakamana i ngā āhuatanga o te iwi, ka rata katoa mai ngā ākonga. Heoi, he mea nui hoki kia kaua e tino poipoia atu kei hinga whakawhirinaki mai. Ko te mea kē me whakanui i te tino rangatiratanga o te ākonga kia mana motuhake ai te whai mātauranga, te whakaaro, te pātai, te piki i te aka o te wānanga.

He mea nui hoki te rite o te mahi a te ākonga i ia rā hei whakapakari i ō rātou whakaaro, pūtakenga pāngarau hoki. Ina hoki, he aha te hua o te tono ākonga kia whakautu mai ki tētahi rapanga pāngarau i ia rā, atu i te mahi tahi noa? Me āta whai anō ngā kaiako kia mārāma rawa ō rātou hiahia mō ngā whakautu a ngā ākonga; ki hea, me pēhea hoki te whakautu, te aro rānei ki ngā whakautu hoki a ētahi atu. Ko tā te kaiako manaaki i te mana pāngarau o te ākonga he aronui ki ngā whakaaro whaihanga e whakapuakina ana ahakoa te rerekē. Mā te whakatauiria atu i te tikanga o te wānanga, ka whai whakaaro hoki ngā ākonga ki te āta whakamātautau i te tika o te pāngarau o ngā whakaaro e whakapuakina ana e ō rātou hoa. Ki te whaimana te whakaaro hei whakaaro tōtika, māna e whaihua ai te whakaako ā muri atu.

Te manaaki i te mana pāngarau o te ākongā kia pakari atu ai

Kāore i kō atu i te kaiako te mea hei whakapakari i te mana pāngarau o te ākongā. Mā te tiaki a te kaiako i ngā momo hiahia, āhuatanga hoki o ngā kāinga, o ngā reo, o ngā āheinga, o ngā tirohanga, ka puāwai mai he tikanga pai i ngā ākongā ki te pāngarau. Mā te rata pai mai nei e mauritau ai te noho o ngā ākongā, ā, e māia ai rātou ki te ako kia mārama ki te pāngarau.

Kei raro nei e kōrerotia ana te whakahau a tētahi kaiako kia whakapakaritia te mana pāngarau i runga i te pai o te whakawhanaungatanga ki ngā ākongā Māori. Hei tāna, he mea nui...

...kia tikanga pai anake te kōwhiri takitahi i te ākongā. Otirā ia kei te tamariki te tikanga o te mahi – ahakoa he aha te take ka taea, ko tā te tuakana he āwhina i te taina – te hunga kāore anō kia pakari; he whakawhanaungatanga tonu. Ki taku mōhio, e mōhio ana rātou e hanga pai ana koe ki a rātou; he mea nui tonu ki ngā tamariki nohinohi, pakeke ake rānei – te mihi a te pakeke ki te tamariki, anō nei he tangata tonu; he whakawhanaungatanga anō. Ina hoki, he mea nui ki a au kia kaua e kataina te tamariki e au, nē hā, he wāhi manaaki tēnei, me hē mai ki konei, mā reira e ako ake ai. Koina te tikanga o te pāngarau.

Nā Te Maro, Higgins, & Averill (2008, p. 57)

Kōrero ai ngā ākongā Māori i ngā kura me ngā kura matua mō ngā kaiako whai whare manaaki – he akomanga e whai mana ai te kuhu a te tamariki ki te ako – arā:

Ko te āhua o tana kōrero, kāore e hōhā mai mēnā ka hē mātou, me te mihi mai ki ā mātou mahi.

Nā Te Maro, Higgins, & Averill (2008, p. 59)

...Ka āwhina a ia i a koe mēnā ka ngaro koe.

...ka taea e ia te āwhina i a mātou i ētahi wā, mēnā e uaua te pātai.

Nā Hawera, Taylor, Young-Loveridge, & Sharma (2007, p. 57)

Mā te mahi whakatōpū a ngā kaiako e whai tikanga ai ngā whakaaro o ngā ākongā ki a rātou anō. He māia, he mārama, he kamakama ki te whai i ngā whakaaro hou, kaupapa hou, me ērā e puta mai ana i ō rātou hoa ākongā. Ka pono rātou ki a rātou anō hei ākongā pāngarau, nā whai anō ka ū tonu ki te whai i ngā tikanga pāngarau ahakoa te uaua.

Ngā whakapuakanga: Anderson, Averill, Te Maro, Taiwhati & Higgins, (2010); Angier & Povey 1999; Hawera, Taylor, Young-

Loveridge, & Sharma, 2007; Te Maro, Higgins, & Averill, 2008;
Watson, 2002.

2. Te whakarite ki te ako

Ko tā te kaiako he whakarite huarahi mō ngā ākonga ki te mahi takitahi, ki te mahi tahi hoki kia mārama pai ai ngā whakaaro.

Tā te rangahau

Ina kāratarawatia ai ngā kaupapa whakaaro, me whai huarahi ngā ākonga ki te mahi takitahi, ki te mahi tahi hoki. He wā kia wehe kē te ākonga ki te mahi takitahi, kia wehe hoki rātou ki te mahi tahi. He wā anō kia takirua, kia takirōpū rānei te mahi, kia noho rātou ki te whakawhitiwhiti whakaaro, ki te ako ngātahi. He wā anō kia uru ai rātou hei rōpū ākonga tahi ki te wānanga tahi, kia whai māramatanga ai rātou kia kitea hoki e rātou te whānuitanga o ngā whakaaro pāngarau e akona ana i taua wā.

Te wānanga taki tahi

He uaua kē kia mau tētahi kaupapa hou, kia whakaotia rānei tētahi rapanga mehemea kei te warea e ngā whakaaro o ētahi atu. Nā reira me whakarite te kaiako kia whai wāhi ai ngā ākonga ki te wānanga takitahi, ki reira āta tau ai te whakaaro ki a rātou anō tē raru ai i ngā whakaaro o ētahi atu.

Te kōrerorero taki akomanga

Ko te kaiako te puna matua i ngā akoranga ā-karaehe mō te whakatipu i ngā tauira tikanga pāngarau. Ko tāna he whakahaere, he whakarite, he mātakitaki i te ako o ngā ākonga, he tuhi hoki i ngā otinga a ngā ākonga me te whakahau i ngā momo tauira e tōtika ai te otinga. Ka mātua mau ngā kōrero ki te kaupapa, heoi ka tonoa e te kaiako kia whakamāramatia e ngā ākonga ā rātou otinga ki ētahi atu, ka whakahaua hoki ki te whakarongo, ki te aronui tētahi ki tētahi, te whakamihi, te whakamātau anō i ngā momo whakaaro, te whakawhitiwhiti whakaaro hoki.

Te mahi takirua, takirōpūiti hoki

Mā te mahi takirua, takirōpūiti hoki e kite ai ngā ākongā i ō rātou āhua hei ākongā pāngarau. He rite te āwhinatanga ā-aronganui, ā-tinana hoki i roto i ēnei momo whakaritenga hei tautoko i ngā ākongā kia mārama ai te tikanga o te mahi, te huarahi hoki ki mua. Ko tētahi tauira o te whakapakari i te ako pāngarau mā roto i te tikanga whakatina i ngā pāhekoheko o te ako kia whai māramatanga ai ngā ākongā ki ngā kaupapa whakaaro, ko te tikanga ako o te tuakana-teina – arā, te tikanga e noho kaiāwhina ai te ākongā mōhio ki ōna hoa ākongā. E ai ki ngā tamariki o ngā kura kaupapa Māori: “Mēnā kāre au i te mārama i ētahi wā ka whakamārama rātou ki ahau.” “Mēnā he tino uua te pātai, ka haere ki tētahi o ōku hoa ki te mahi rautaki, āe, mēnā he māmā ngā mea katoa, āe, mahi ko koe anake.”

He whakapai ake i te ako tētahi o ngā hua o te mahi takirua, takirōpūiti hoki, engari anō te whakawhitiwhiti, te whakamātautau whakaaro, ā, ka hua ake ai he wānanga kairangi tonu atu. Mā te tautoko o te mahi takirōpūiti e ako ai ngā ākongā ki te whakapae, ki te tautohetohe, ki te whakamana hoki i ngā take pāngarau.

Ka whakamāramatia e tētahi kaiako i te kōrero e whai ake nei, te āhua o te whaingā māramatanga hou ka hua ake i ngā ākongā Māori e mahi tahi ana me ētahi atu i te akomanga reo Pākehā.

...ko te take kei te rongō rātou ki ō rātou whakaaro anō, tētahi ki tētahi. Whai take ai rātou ki te kōrero kua tau ngā whakaaro... he mahi tahi me te tangata te tikanga; he mahi ngātahi, te rourou a tēnā, te āwhina a tēnā kia whai hua tahi ai ngā hoa, heoi kāore i te pīrangī kia eke tētahi i runga ake i tētahi. Nā, tōna tikanga kia rite tahi, ka kīa ai – ‘nā mātou i whakataū’, ‘nā mātou i mahi’ rānei, ‘nāku ia i āwhina’ rānei, koira te tikanga o te mahi tahi; he mana takitini te tikanga, e hara kē i te takitahi.

Nā Te Maro, Higgins, & Averill (2008, p. 55)

Mō te ako ā-rōpū me whai wāhi ngā ākongā kāore nei e rarua ana e ngā momo whakawai, ā, e māhorahora ana e ngāwari ai te mahi ngātahi. Kia mōhio hoki rātou ki te tūmahi e akona ana, kia herea hoki rātou e ngā hua o te mahi a te rōpū. Ko tā te kaiako he whakataū kia mārama, kia mau hoki ngā ākongā ki ngā tūranga mahi, hei tauira, te whakarongo, te whakautu, te pātai, te āta whakamātautau hoki. Ina te whakamāramatanga a te kaiako i ngā hiahia:

Ko taku hiahia kia whakamāramatia atu e koe ki ngā tāngata i roto i tō rōpū me pēhea tā koutou whiriwhiri i te take nei. Kātahi ka pātaihia e koe mēnā e mārama ana rātou ki a koe, ā, me whai pātai anō ki a koe. Ka mutu me mōhio katoa koutou ki te whakamārama i pēhea tā koutou i whiriwhiri ai, heoi me whai whakaaro ki ētahi pātai ka pātaihia mai, ā, me pātai nā.

Ko tā te rōpū ināianei he whakamārama, ko tāu he titiro ki tā rātou mahi, ki tā rātou whiriwhiri hoki i te tikanga o tā rātou tauira. Ka mahi nā rātou, ā, mēnā kāore i te mārama ki a koe, me pātai kia mōhio ai. I ia mahinga me pātai koe aua pātai kia mārama ai.

Nā Hunter (2005, pp. 454–455)

Me iti noa ngā rōpū kia tino whai hua ai – kau e neke atu i te tokowhā, tokorima rānei. Ki te rerekē ngā mōhiotanga pāngarau o tēnā ākongā, o tēnā ākongā, ka rerekē anō ngā momo taumata o ngā kitenga ka hua ake; mā tērā e āhua whānui ai te māramatanga.

Ngā whakapuakanga: Anderson, Averill, Te Maro, Taiwhati, & Higgins, 2010; Hunter, 2005; Sfard & Kieran, 2001; Te Maro, Higgins, & Averill, 2008; Wood, 2002.

3. Kauwhatatia te kauwhata o te ākongā

Ko tā te kaiako tōtika he whakarite i ngā akoranga pāngarau kia taea e te ākongā tōna ake kauwhata pūmanawa, pūngākau, pūmahara hoki te piki ake.

Tā te rangahau

Ko tā te kaiako tōtika whakarite akoranga he whakawhata i ngā mōhiotanga, i ngā kaingākautanga o te ākongā hei tohu kura whiriwhiri. Kāore i aro atu ki te whakakaha i ngā ngoikoretanga, te whakakīki whāruarua rānei, engari ka tahuri kē ki te whakapakari i ngā pūmanawa ora o te ākongā, ā, ka mirimiria ā rātou tohutohu kia whāia ngā hiahiatanga ako o te ākongā. Ki tā rātou titiro “he mea piki haere te māramatanga” tēnei mea te whakaaro, nā reira ka noho ko ngā whakaaro o te ākongā hei pou kauwhata ake i te ako. Ko ngā momo kaiako nei e aronui atu ana ki ā rātou ākongā, ki ngā tikanga pāngarau anō hoki.

He whiringa ako, he whiringa whakaaro

Ko tā te kaiako tōtika he whakatū i te mātauranga o te ākongā hei pouwhakarite i tana mahere, hei pouwhiriwhiri i ana whakatau rere tūpono noa. Ka noho ko ngā pou mātauranga pēnei i te reo, ngā pūkenga pānui, whakarongo hoki, te tau ki ngā tauira whīwhiwhi, te whakatau ā-pāngarau, hei papa kauwhata ake ki runga. He hua tonu rā ō ngā ngohe hei whai māramatanga. Kei ngā mahi noa o te wā ētahi āhuatanga hei whakamahi, hei whakatipu mā ngā kōhungahunga tonu i ngā pūkenga pāngarau kia mārama ai. Kei te tuhinga i raro nei ka whakarere a Rangi i te poi me te waiata hoki hei whakatipu i tōna whakaaro takiwā. Ka tika te whai haere o āna ringa poi i ngā kupu o te waiata.

E Rere Taku Poi

Ngā kupu	Whakapākehātanga	Ngā ringa poi
Toru whā	Three four	Mau hope ngā ringa
E rere taku poi	Fly my poi	Ka rere te poi ki mua i a ia
E rere taku poi ki runga	Fly my poi above (me)	Ki runga i a ia
Ki runga	above (me)	
E rere taku poi	Fly my poi	Ka hoki mai te poi ki mua i a ia
E rere taku poi	Fly my poi	
Ki raro	below (me)	Ka heke te poi ki raro
Ki raro	below (me)	
E rere runga	Fly above (me)	Ka rere ki runga
E rere raro	Fly below (me)	Ka rere ki raro
E rere roto	Fly inside	Ka rere mai ki te tinana
E rere waho	Fly outside	Ka rere atu i te tinana
E rere taku poi	Fly my poi	Ka hoki mai te poi ki mua i a ia, ā,
E rere taku poi	Fly my poi	
Ki runga	Above (me)	Ki runga i a ia
Ki runga	Above (me)	

Nā Royal Tangaere (1997, pp. 40-41)

Ka kitea ana e ngā ākongā te horopaki o te āhua, o te mahi rānei e noho nei te rapanga, ka noho ko ō rātou mōhiotanga hei papa mō te whakarite rautaki e hāngai ana ki ngā momo horopaki hei whakamahine atu ā tōna wā he rautaki whānui kē. Hei tauira, ki te whiriwhiria e ngā tamariki nohinohi me pēhea te tohatoha ki ngā tāngata tokowhā o te whānau, ka mātua tahuri ki te whakarite noa, hāunga anō ngā tikanga ō-kawa o te whakawehe.

Nā te whai a ngā kaiako tōtika i ngā huringa whakaaro o ngā ākongā i a rātou e takatū ana ki te mahi, ka āhei rātou ki te whakatakoto pakirēhua hou, te whakairo ngohe hou rānei hei wero i te hinengaro, hei whakawhānui atu rānei i te whakaaro. Tēnā whakaarohia tēnei rapanga: *Āhua 2 hēkona te rerenga o te kapowai i te 18 mita. Ka hia te roa o tōna rerenga i te 110 mita?* Ka mōhiotia e te kaiako ka whakaotia tēnei rapanga e te ākongā mā te whai tikanga tāpiri, nā reira pea ka whakarerekēhia te ngohe kia whāia kētia ko ngā tikanga whakarau hei whakaoti: *Ka hia te roa o te rerenga o te kapowai i te 1100 mita? Ka hia te roa o te rerenga o te kapowai i te 110 mita mehemea ka rere i te 9 mita i te 1 hēkona?* rānei.

Mā te hē, mā te hapa o te ākongā e tipu tika atu ai

He nui ngā take pērā i te paunga o te wā, te kore aro rānei, i hapa ai te ākongā. Engari ka hapa anō i te ritenga kētanga o te whakamahukitanga o te tikanga pāngarau ki tā te ākongā whai mārāmatanga. Kāore e whakahēngia noatia ēnei “pōhēhētanga” e te kaiako tōtika engari ka kitea iho e rātou te tikanga tūturu o tēnei āhuatanga hei whakatipu i te whakaaro o te ākongā. Hei tauira, whakaaro noa ai te tamariki he whakaiti te hua o te wehe, ka whakawhitia tēnei whakaaro ki te tikanga hautanga ā-ira kia mārāma ai rātou. Ko tā te kaiako tōtika he tiaki i tēnei momo pōhēhētanga hei whakatipu i te whakaaro kia tino mārāma ai.

He nui ngā tikanga āwhina a te kaiako i ngā ākongā kia whai hua ai rātou i ō rātou hapa. Ko tētahi he whakahui i a rātou ki te whakawhitiwhiti kōrero hei whakahāngai i ō rātou whakaaro ki ngā uauatanga i puta ake. Ko tētahi anō ko te tonono atu ki ngā ākongā kia whakamāramatia e rātou ō rātou whakamāramatanga, ō rātou rautaki rānei kia whai wāhi ai rātou ki te whakatauriterite, ki te whakamātautau hoki i ō rātou whakaaro. Nā ko tētahi anō ko te whiu pātai hei totohe mā rātou, ka whakatau ai. Hei tauira, kia hoki anō ki te hapa o te tauwehe i kōrerotia i mua ake, ka tonoa e te kaiako kia kimihia e ngā ākongā te rerekētanga i waenganui i te $10 \div 2$, $2 \div 10$, me te $10 \div 0.2$, ā, mā te huahuatanga, mā te whakaahua, mā te pakitau e whakaatu mai.

Te tikanga whakapātari

Mā te whai mahi whakapātari e tika ana, ka whakamōhiohia atu e te kaiako te pae tawhiti o te hiahia e taea ai. Ko te tikanga he whakamōmona i ngā whakaaro e mau kē ana i ngā ākongā, nā, i te nuinga o te wā ka mirimiria ngā ngohe kia whai huarahi kē atu ngā ākongā ki te māramatanga. Mō ngā ākongā kāore i te tino eke, ka kitea e ngā kaiako he huarahi hei wetewete i te whīwhiwhi o te mahi, tē huri ai ki te auautanga o te mahi, tē takahi ai te mana o te tikanga pāngarau o te ngohe. Ko ētahi o ngā whakamōmonatanga, he tuku tīwhiri, he whakamāmā i te whakaaturanga mai o ngā huanga, te whakaiti i ngā tuhinga mai, te whakamahi hoki i ētahi atu tikanga whakahihiri i te mahara. Waihoki, ka whakauauatia ake ngā mahi e ngā kaiako mō ngā ākongā matatau ake mā te whakatū taiepa i mua i ngā whakataunga, mā te tango i ētahi o ngā kōrero, mā te whakarite i ētahi momo whakaaturanga ake, mā te tono kia whānui rānei ngā whakamāramatanga.

Ngā whakapuakanga: Carpenter, Fennema, & Franke, 1996; Houssart, 2002; Royal Tangaere, 1997; Sullivan, Mousley, & Zevenbergen, 2006.

4. Ētahi ngohe pāngarau whaihua

E mārama ana ngā kaiako tōtika kei te whiriwhiringa ngohe, taurira anō te tikanga o te titiro, o te whakatipu, o te whakamahi, o te mārama hoki o te ākongā ki te pāngarau.

Tā te rangahau

Mā te takatū ki te mahi ka tipu ake ngā whakaaro o ngā ākongā mō ngā tikanga pāngarau, ā, ka mōhio hoki rātou tērā e mārama atu ai ki te tikanga pāngarau. Ko te hua o ngā ngohe akoako e tuku nei i ngā whakaaro ake o ngā ākongā mō ngā kaupapa me ngā hononga hira nei, he whakahauhau i ngā ākongā kia whai mana ai hei ringa rehe, hei hinengaro kakama ki te mahi pāngarau. Ehara i te putanga ihu ki te whakautu kotahi te tikanga nui o te ngohe, engari ko te whai wāhi o te ākongā ki te takatū, ki te tohetohe ki ngā whakaaro, ki te whakamahi kia mātanga rawa te whānuitanga o ngā tikanga pāngarau hei whai (pērā i te whakamanatanga, te waitaranga, te whakawhānuitanga hoki).

Te aronga o te pāngarau

Ko tā te kaiako tōtika he waihanga i ngā ngohe i runga i te tika me te hiranga o te pāngarau; ka whai wāhi hoki rātou ki te whakarite ngohe hei āwhina i ngā ākongā katoa ki te whakanui i ō rātou mōhioatanga ki te āhuetanga o te mahi e whai nā rātou i taua wā. Ehara i te mea ka rite noa te mahi, he hokihoki atu ki te hātepe kātahi anō nei ka mau i a rātou, engari me whai whakaaro ngā ākongā ki ngā tikanga pāngarau hiranga, mō ngā tikanga pāngarau anō hoki. Ko te tikanga o te wānanga pāngarau he whaiwhai i ngā tikanga tātai, i ngā hātepe, i ngā whakaritenga hoki i runga i te herenga ki ngā kaupapa whakaaro, ki ngā whakamāramatanga, ki ngā tikanga hoki. Ina rukuhia ai te wānanga o te pāngarau e te ākongā i roto i āna mahi ka pakari anō ia ki te whai whakaaro ki a ia anō kia kaua e whakawhirinaki atu ki te kaiako, kia riro māna ia e ārahi. Ki te pēnei nā te whai, kua rata te ākongā ki te pāngarau, kua kitea te aroarowhenua o tāna mahi.

He ngohe hei rapanga

Tukuna ai e te kaiako ngā tohu hira i roto i ngā ngohe pāngarau e whakaritea ana e rātou. Ko tā te kaiako tōtika, he whakarite ngohe hei whakapae kia whakamātautauria, hei whakatakoto rapanga, hei kimi

tauirā, hei whai otinga kē atu mā te ākongā. Koia tērā ko te ngohe puare, ko te ngohe hanganga hoki hei mahi whakamahuki horopaki mā te ākongā, kātahi ka whakamāramatia te tikanga pāngarau o roto. Hei tauira, ki te tonoa te ākongā kia whakaritea mai he rangi kōrero hei mahi kai mā te whānau, ko ngā mahi me whai te ākongā ko te whakamārama i ētahi kōrero, ko te whaiwhai take hei whakatakoto, ko te ruku atu i tōna anō mahara ki te whai mōhiotanga hei whakamahi māna, ko te tūhonohono i ngā tikanga o roto o te pāngarau me ētahi atu kaupapa mātauranga. Ka whai ana te ākongā i te tūturutanga o te mahi pāngarau, ōna tikanga whīwhiwhi katoa nei, ka mōhio ia ehara te pāngarau i te mahi whai whakautu tika noa nei.

Ko te ngohe puare tonu tērā mō te whakatipu i te whakaaro whaihangā, auaha hoki ka kīia ai hei tohu “tākaro” mō te pāngarau. Hei tauira, ki te tonoa ngā ākongā kia whakaaturia mai ētahi momo whakaaturanga o te 2/3, me tahuri ngā ākongā ki te whai i ngā tikanga pūmau tonu o te pāngarau pēnei i te kimihanga, i te waihangā, i te whaitakenga, i te whakawhitinga kōrero hoki.

He ngohe hei mahi

Me whai wāhi ngā ākongā ki te whakamahi i ngā kaupapa e akona ana e rātou, hei whakapakari ake i ō rātou mōhio ki te tātai tau, i ō rātou pūkenga whakaoti rapanga, i ō rātou māramatanga ki ngā kaupapa. Mā te “mahī tūturu” i te pāngarau ka pakari ake ngā momo pūkenga; hei tauira, ka akoako ana ngā ākongā mō te rahi ā-porowhiti, ā – rohe hoki ka whai wāhi rātou ki te whakarau, ki te hautau hoki. Ka whai hua anō te tākaro ki te whakapiki i te mātau, i te tikanga hanga noa. Ko tā te kaiako tōtika he whakarite tākaro kāore mō te whakapau taima noa iho engari hei whakatutuki i ētahi tikanga pāngarau tonu, hei kukume tika i ngā whakautu, hei whakapātaritari hoki i ngā hinengaro ākongā.

Ngā whakapuakanga: Henningsen & Stein, 1997; Watson & De Geest, 2005.

5. Ko te tūhonohono

Ko tā te kaiako tōtika he hāpai i ngā ākongā ki te whakahonohono; i ngā momo whakaotinga rapanga, i waenganui i ngā whakaaturanga pāngarau me ngā kaupapa, i waenganui hoki i te pāngarau me ngā mahi noa o te takiwā.

Tā te rangahau

Kia mārāma ngā ākongā ki tētahi whakaaro hou, pūkenga hou rānei, me mātua whai i ētahi momo whakaritenga hei whakahono i taua āhuatanga ki ō rātou mōhiotanga pāngarau. Mā te whai i ngā ngohe tuitui i ngā tini kaupapa ka mārāma ngā ākongā ki te tūhonotanga o te pāngarau me te ao kikokiko e noho nei rātou. Mā ngā momo whakaritenga a ngā ākongā i te pāngarau ki ngā mahi o te wā, ka mārāma hoki ki ngā hua o te pāngarau ki te ao, ki ngā hua anō ki ētahi atu whare mātauranga, ā, ka tangata whenua haere te pāngarau i roto i a rātou.

Te tautoko i ngā mahi tūhonohono

Kia whakanuia ngā tūhonohononga i waenganui i ngā momo whakaaro pāngarau rerekē, koinēi te whai a ngā kaiako tōtika. Mā te whakarerekē haere i ngā take kia mārāma ake ai ngā ākongā ka mau i a rātou ngā whakaaro hou. Tērā ka tikina atu e te kaiako te tikanga “kia tuaruatia te 6” hei whakaritenga kē mō te “6 tāpiri ki te 6”. Ka whakanuia ake ētahi tauira, tikanga pāngarau hoki mā te whakarerekē i ngā whakaritenga i roto i te whānau rapanga; hei tauira, ka whakakipakipahia te ākongā ki te whakapae atu, ki te whakamātautau anō i te tū, i te rōnaki hoki o ngā rārangi tētahi ki tētahi, ina whakatakotoria mai ai te whakapapa whārite pēnei i te $y = 2x + 3$, $y = 2x + 2$, $y = 2x$ me $y = x + 3$.

Me mātua mōhio ki te whakahono i ētahi whakaaro pāngarau rerekē tētahi i tētahi te āhua, mā reira e mārāma rawa atu ki ōna kaupapa whakaaro. Ahakoa ka noho wehe te hautau, te tau ā-ira, te ōroutanga, te hautanga i roto i te whakaaro, he mea nui te āwhina i ngā ākongā kia kitea te whanaungatanga mā te whāwhā haere i ngā momo whakaaturanga (hei tauira, $\frac{1}{2} = 50\%$), mā te whakaoti rapanga rānei mō ngā mahi noa o te wā (pēnei i te whiriwhiri i te utu hinu mō tētahi haerenga mā runga motokā).

Ngā tini otinga me ngā tini whakaaturanga

Me nui atu ngā momo whakaaturanga hei whai mā te ākongā kia mārāma ake ai rātou ki ngā kaupapa whakaaro, kia kamakama ai rātou ki te tātai tau. Koinei te mahi a te kaiako tōtika, he whakariterite i ngā momo whakaaturanga kia nui rawa hei whai mā te ākongā – kia whai wāhi anō hoki rātou ki te whakawhitiwhiti i waenganui i aua whakaaturanga. Hei tauira, he rerekē te titiro, te whakaaro hoki o te ākongā e whakamahi ana i ngā momo whakaaturanga pānga (ngā mahi noa o te wā, he kauwhata, he tūtohi, he whārite) ki ngā hononga i waenganui i ngā rerekētanga.

Ki te maha kē atu ngā whakaotinga hei whakatutuki ngohe ka noho tēnei hei āhuatanga poapoa ākongā kia kumekumea i a rātou ā rātou ake whakaritenga mahi. Tahuri ai te kaiako tōtika ki te whakakōrero i te katoa o te akomanga hei tātai atu i ngā momo whakaritenga a ngā ākongā kia mārakerake ai te kite i ngā tuhonohononga i waenganui i aua whakaaturanga. Hei tauira, whakaaturia ai e te ākongā te otinga mō 103-28 mā te rārangi tau makere, mā te tauira pūtāke-ōtekau, mā te reo tohu rānei. Ko te take ka whakawhitiwhitia e ngā ākongā ā rātou rautaki otinga kia tipu anō i a rātou te wānanga o te pāngarau kia pakari, kia rere, kia tika.

Te whakatangata whenua

Ina mārāma ai te ākongā ki te tikanga whakamahi i te pāngarau hei āhuatanga whakatutuki i ngā rapanga nui o ō rātou nā noho, ka manawareka atu, ka kitea te aroarowhenua o te mahi. Ka āta whiriwhiria e te kaiako tōtika kia mau tonu te whakaaro ki te tikanga pāngarau kia kore ai e warea te ākongā ki kaupapa kē, ā, mā te kaha whakamārāma i ngā hononga me ngā whāinga pāngarau, ka āwhina i ngā ākongā kua mina aro kē ki te āhua o te mahi kāore i aro tika ki tōna tikanga pāngarau. Heoi ka āwhina hoki i ngā ākongā e taki wehewehe ana i ngā rapanga, mahue kē ko ngā whakaaro e tūhonohono ana i aua rapanga.

Ngā whakapuakanga: Anghileri, 2006; Watson & Mason, 2006.

6. Te aromatawai hei tikanga ako

Ko tā te kaiako tōtika he whakarite i te whānuitanga o ngā momo tikanga aromatawai hei whakapuaki mai i ngā whakaaro o ngā ākonga, hei tautoko hoki i a rātou ki te ako.

Tā te rangahau

Ko tā te kaiako tōtika he whakarite i te whānuitanga o ngā momo aromatawai ō-kawa, ō-paki hoki hei tiro tiro ki te piki haeretanga o te ako, hei whakatau i ngā take o te ako, hei whakarite mahi anō e ahu whakamua atu ai te ako. Heoi ko tā rātou mahi, he kohikohi kōrero i ngā mahi noa o te akomanga mō ngā tikanga ako o ngā ākonga, i te āhua o ō rātou mōhiotanga, ngā mahi hoki e taea e rātou, tae atu ki ngā kaupapa e kaingākau ana ki a rātou. Mā te pēnei ka mōhio rātou he aha ngā mahi tōtika, koretake rānei, ā, mā reira anō e tika ai ā rātou whakatau mō te whakaako, mō te ako hoki.

Te wānanga i ngā pūkenga whiriwhiri me te māramatanga o te ākonga

E hia kē nei ngā tohutohu hei whakatau mā te kaiako i ia akomanga. He rite tonu te aromatawai a te kaiako i te ahuwhakamuanga o te ākonga, mā tēnei e mōhio ai te kaiako he aha ana pātai hei pātai, ki hea hoki pātai atu ai, me pēhea hoki te whakautu i ngā pātai a ētahi. He nui ngā hua o te mātakitaki noa i ngā mahi a ngā ākonga me te kōrero hoki ki a rātou: ka āta mōhio ngā kaiako ki ngā mōhiotanga o ngā ākonga, ka kitea hoki ngā huarahi mahi e hiahiatia ana kia whāia, ka rongu hoki ki te āhua o ngā reo e kōrerotia ana. Heoi ko tā te kaiako tōtika he whakawhāiti i ēnei kōrero katoa hei whāriki i ana kōwhiringa tauira, whakamāramatanga hoki hei aronga mā rātou i ngā kōrero a te akomanga.

He hua nui anō o te noho ki te uiui takitahi: tērā e puta ake ai ngā whakaaro o te ākonga ina kōrerotia takitahitia ā-uiui nei, kāore e puta pērā mēnā ka tuhia mai. Auau ana te ohore o te kaiako ki ngā mōhiotanga, kore mōhiotanga rānei o te ākonga, ina uiuia tuatahitia ai e ia. Ka kaha ake te aro o te kaiako ki ngā momo hiahiatanga ako o te ākonga i te mea ka whakapātaritarihia ōna whāinga, ōna mōhiotanga hoki.

Te uiui a te kaiako

Mā te pātai a te kaiako tōtika, e whai wāhi ai ngā ākonga ki te whakaaro pāngarau, ki te whakaoti rapanga pāngarau hoki. Kia whai taima te ākonga ki te ruku i te hōhonutanga o ana whakautu, kia whakakipakipahia hoki kia puta mai he māramatanga, ka tūturu te whai hua mātauranga a te ākonga. Ko te hua nui anō o te pātai he whakamātautau i te mōhiotanga, i ngā whakaaro hoki o te ākonga. Kāti, ko te kōrero i raro nei, e whakamōhio ana te kaiako i te tikanga wehewehe ki te akomanga rūmaki reo Māori. Ka pātaihia atu ētahi pātai matua kia mōhiotia ai pēhea te mōhio o te ākonga, otirā ka uruhina te ākonga kia whai whakaaro hou, māramatanga hou hoki a ia.

T: Nō reira, nā, māku e hoatu ētahi anō. Nā, e hia i te tuatahi?

Ākonga: Rua, whā.

T: E whā, āe, tangohia e whā. Tokohia ngā tāngata?

Ākonga: Tokorua.

T: Tokorua. E hia ngā rare e ...?

Ākonga: E rua.

T: E rua, ka pai.

Nā Meaney, Fairhall, & Trinick (2007, p. 28)

Ko te mea nui e tohu ana i te tika o te pātai ko te āhua o te rongu a te kaiako ki te whakautu a te ākonga. Ka aro tahi atu te kaiako tōtika ki te tika, te aha rānei o te whakautu, me te āhua pāngarautanga hoki o ōna whakaaro. Mōhio tonu ia ehara pea i te kore mōhio te take o te hē o te whakautu, engari he mea puta noa mai i te rerekē o te whakaaro. Waihoki, tērā e tika ai te whakautu engari nā te hē kē i tae atu ki reira.

Hei whakahihiri i te hinengaro o ngā ākonga kia mārama hoki ki ō rātou whakaaro, ka tīmata te pātai a te kaiako ki tōna otinga kē; hei tauira, *Mēnā ko te 24 hm² te rahi o te tapawhā, ko te 22 hm tōna āwhiotanga, he aha ōna ine?* Ki te maha atu ngā momo whakautu, whakaotinga rānei ki te pātai kei reira te hua pito mata ki te hōhonutanga o te whakaaro o te ākonga.

Te whakahoki kōrero

Ko te mahi te tino tikanga o ngā whakahokinga kōrero whai hua, ehara ko te māka; heoi māna e mārama mai te tika, te hē rānei o tētahi take, ā, he aha hoki he mahi hei whakapai atu. Hei tauira, ko te tikanga o tēnei whakahokinga kōrero, *Tirohia te katoa, kātahi ka tuhi ai koe i te tohu ōrite ki roto i te katoa*, he tuku kōrero hei āwhina i te ākonga

ki te whakapai ake i āna mahi. Ko tā te kaiako tōtika he tautoko i te ākongā ina raru ai, kāore mā te tuku noa i te whakautu, engari mā te whakakipakipa i a rātou ki te whai kōrero anō, ki te whai tikanga anō, ki te kōrero rānei ki ōna hoa ako. Ki te kī atu te ākongā kāore ia i te mārāma, tērā pea ka whakahokia e te kaiako: *Tēnā, he rite te wāhanga tuatahi ki tērā atu o ngā rapanga. Kātahi ka tāpirihia ko tētahi tikanga taurangi. Māhau anō tērā e kimi atu. Kāore e roa ka hoki mai ahau.* E whakatenatena ana te kaiako i te ākongā kia whai whakaaro tonu atu ki te take, ā, kātahi anō ka hoki atu ia kia kite. Kei roto i te kōrero i raro nei e whakahoki kōrero ana te kaiako rūmaki reo Māori hei whakahauhau i ngā ākongā ki te whai whakaaro hou, reo hou hoki.

Te T: Āta whakarongo. Pēhea kei a matua toru tekau ngā rare? Ka pai, toru tekau ngā rare i hoatu au. E hia ngā rare, kāo, koa. I hoatu au tekau mā rua ki ōku whanaunga, e hia ngā mea e toe ana?

Ākongā: Tekau mā waru.

T: Ko tēnei te tekau kōtiro, tekau rua i konei, kōtiro taihoa, kōtiro he aha konei nē tekau tangohia rua ka waru nē, ka pai kei au tekau mā waru.

Mā te whakamahara i te ākongā e noho huinga tekau ana ngā rare kia kaua noa e tatau, ka āwhina te kaiako i te ākongā kia oti i a ia te rapanga.

Nā Meaney, Fairhall, & Trinick (2007, p. 56)

Te aromatawai whaiaro, te aromatawai takihōa

Ko tā te kaiako tōtika he whakariterite kia whai wāhi ai ngā ākongā ki te whakamātautau i ā rātou ake mahi. Tērā pea ka titoa e te ākongā āna ake pātai whakamātautau, ka whakawhitiwhiti i ā rātou tikanga angitu, ka tuhia he puka pāngarau, ka whakatū rānei i tōna wharekōrero, e kitea ai te tipu, te putu o te hua mārāmatanga. Ka whakahoki kōrero ana hei whakatenatena i te kōrero tahi a te ākongā ki te ākongā, a te ākongā ki te kaiako, ka kāinga te noho o te tikanga aromatawai whaiaro hei pou ako mā te ākongā kia puta ia ki tōna whai ao, ki tōna anō ao mārāma.

Ngā whakapuakanga: Meaney, Fairhall, & Trinick, 2007; Steinberg, Empson, & Carpenter, 2004; William, 2007.

7. Te whai pūkenga mō te whakawhiti kōrero pāngarau

Ko tā te kaiako tōtika he whakarite i ngā kōrero o te akomanga kia aro ki te tohe i ngā take pāngarau.

Tā te rangahau

Whakahauhautia ai te ākonga e te kaiako tōtika ki te whakamārama, ki te whakamana hoki i ana otinga. Ka tonoa ngā ākonga ki te tohe i ngā whakapae pāngarau a ētahi atu. He mea whanake anō tēnei āhuatanga i te wānanga a te ākonga i ngā whakapae, i ngā whakahē, i ngā whakautu. Mā te ārahi a te kaiako ka mōhio haere te ākonga ki te whakaaro pāngarau, ki te kōrero i te reo pāngarau, ki te whai hoki i ngā tikanga pāngarau. Ka huri ana ngā whakaaro i ngā tikanga here (o te pāngarau) ki te mārama ki te āhua o te pāngarau, ka kaha kē atu te whai a te ākonga i ngā whakaaro nō reira anō ngā whakautu, kāore ki te whakautu anake.

Te whakapapa i ngā tikanga o te kōrero me te whakaaro pāngarau

Me mātua whakaako i ngā ākonga ki te kōrero ā-pāngarau, ki te whakamārama i ngā tikanga pāngarau kia tika, ki te whakamana hoki i ā rātou otinga. Heoi anō tā te kaiako tōtika he whakahauhau i ā rātou ākonga ki te whakapuaki i ō rātou whakaaro mā te kōrero, mā te tuhituhi, mā roto anō hoki i ngā momo whakaaturanga.

Ko te takirua tētahi tikanga hei ārahi i ngā ākonga i roto i ngā āhuatanga o te mahi pāngarau. Ko te takirua, he tuarua, he whakakupu anō, he whakamōmona rānei i te kōrero a te ākonga. Mā konei (i) e whakanui atu ngā whakaaro ake o ngā ākonga, (ii) e āwhina ngā ākonga kia mārama haere ai ki te matū o aua whakaaro, (iii) e whai wāhi ai ki te whakariterite kia mārama rawa ā rātou ākonga, (iv) e whai whakaaro hou anō, e huri ai rānei ngā kōrero ki kaupapa kē.

Te whakatipu pūkenga hei tautohe i ngā take pāngarau

Ko tā te kaiako tōtika ārahi i ngā ākonga ki te tohe pāngarau, ka whakahauhau i a rātou ki te whakatakoto take, ā, ki te karo hoki i ngā whakapae a ētahi atu; heoi mā tēnei e waia ai rātou ki te whakarongo

ki ngā whakaaro o ētahi, ki te taupatupatu hoki i ngā whakapae kia puta he whakatau ki te ao mārama.

E kōrerotia ana i raro iho nei tētahi akomanga e whakawhiti kōrero ana mō te whakapae e kī ana, e huri ai te hautau hei tau ā-ira. Ina hoki a Bruno rāua ko Gina e whakapakari ana i a rāua i tēnei whakawhitinga kōrero ki te tohetohe i ngā take pāngarau. Kātahi ka kōrero te kaiako ki te akomanga:

Kaiako: Ka pai, tēnā kia paepae mai ō koutou taringa ki te whakarongo, i te mea he kōrero nui ā Gina rāua ko Bruno. Ko tā Bruno he whakapae, ā, ka tohea e Gina. Mā te tohetohe nei ka whakaarohia anō tana whakapae, koinei tonu te tikanga o te whakapae. Ka mea koe kei te kitea atu tētahi tauira, heoi anō ka whaikupu koe anō nei he pono, engari kāore anō kia tino tūturu ō whakaaro. Heoi, nā te putanga mai o ana (ā Gina) kōrero, ka whakakupu anō a Bruno i tāna i whakapae ai. Tērā pea ka hoki anō ia ki tana whakapae tuatahi, ki tētahi kōrero hou tonu atu rānei. Ina rā, he mahi whai tikanga tonu tā rāua mahi. Kei te kimi tauira rāua, ā, kei te whakapuaki kōrero tukipū noa.

Nā O'Connor (2001, p. 155-156)

Ka whakaritea e te kaiako nei kia tukuna ngā whakaaro o ngā ākongā kia rere, mōhio tonu ia ki hea ia hou atu ai ki te kōrero, puta atu ai rānei, ki hea anō tohe ai kia puta ai he māramatanga, ki hea hoki whakatau ai i ngā whakapae a ngā ākongā, ā, ki hea rawa whakatika ai i ngā hē, whakatau ai i ngā mahara. I ngā ākongā e akoako ana ki te tohetohe i ngā take pāngarau, ki te ako hoki i ngā tikanga hei whakakaha ake i te whakapae, ko tā te kaiako he āta whakarongo ki ngā whakaaro me ngā kōrero a ngā ākongā, ka puritia kētia ko āna hei whakapuaki ki ngā wāhi e tika ana.

Ngā whakapuakanga: Lobato, Clarke, & Ellis, 2005; O'Connor, 2001; Yackel, Cobb, & Wood, 1998.

8. Te reo pāngarau

Ko tā te kaiako tōtika kōrero i te reo pāngarau he whakatauiria atu i ngā kupu e tika ana, he whakamārama hoki i ngā kōrero kia mau i te ākonga.

Tā te rangahau

Ka penapenahia, ka kōrerotia e te kaiako tōtika te reo e kōrerotia whānuitia ana e te iwi pāngarau. Ka tuituia e te kaiako te reo pāngarau, te māramatanga pūmanawa o te ākonga, me te reo hoki o te kāinga. Otirā ka whakamahukitia, ka whakatauiratia hoki ngā kaupapa whakaaro me ngā kupu kia mārama ki ngā ākonga ka tahi, kia mau tonu te tikanga o ngā kupu ka rua. Mā te āta whakawehe a te kaiako i ngā tikanga o ngā kupu, ka kitea e te ākonga ngā rerekētanga me ngā takeretanga o te reo pāngarau.

Te whakaako ake i te reo

Akona ai te reo pāngarau e te ākonga mā te mārama o te whakaako ake, mā te whakatauiria hoki. Tērā e whakaahuatia ai te kupu pāngarau hei āwhina i te ākonga kia mau i a ia tōna tikanga. E kōrerotia ana i raro iho nei te mahi whakaahua a tētahi kaiako hei whakamārama i te kupu *taunga*. Nō muri ka tukuna e ia he kīnga hei whakahoki mā rātou.

T: Kāore he raru mō tēnei. Engari, mehemea kei te kōrero i tērā kei te hoatu i tētahi ingoa ki tērā mea, arā ko te rua tōraro tahi, koina te taunga. Ki hea tau ai ki runga i te tukutuku? Me ako koutou i ēnei kupu, pūwāhi. Kei te kōrero mō taua wāhi ko te taunga kei te kī koutou, ‘Kei hea tērā i runga i te tukutuku.’

Nā Meaney, Trinick, & Fairhall, (2007, p. 24)

I ētahi wā ka tīkina atu he kupu, he tohu rānei e rite ana te tikanga pāngarau hei āwhina i te ākonga kia mārama ki te tikanga o tētahi kaupapa; hei tauira, “x”, “whakarau”, me te “whakaauau”. Me āta kōrero i ngā kupu pēnei i te “tō raro iho”, “nuku atu”, “pea”, me te “haurua”, i te mea he rerekē te tikanga i te reo o te kāinga.

Ngā āhua momo reo me te reo o te kāinga

Me kōrero te kaiako i te reo ake o te pāngarau hei tauira atu ki nga ākongā hei reo kōrero anō mā rātou. Ko ngā kupu pēnei i te “uara pū”, “aro takahanga”, me te “tērā tonu” kāore pea he ritenga i te reo o te kāinga. Mēnā ka rerekē te reo o te whakaako i tērā o te kāinga ka uaua kē atu mō te ākongā te whai i ngā tikanga o te pūtūmua, i te takoto o te rerenga kupu, i ngā rerenga o te kōrero, i ngā rerenga here – me te horopaki anō e kōrerotia ai ngā rapanga. Tē aro i te kaiako ngā taiepa hei piki mā te ākongā o reo kē, o tikanga kē kia mārama atu ai ia. Koina te pai o te whakawhiti reo (tikanga rānei), arā, ka tīkina atu e te kaiako te reo o te kāinga, te kupu, te kīnga, te rerenga rānei mō te kaupapa pāngarau hei āwhina i te ākongā kia mārama ia ki te tikanga e kōrerotia ana.

Ngā whakapuakanga: Meaney, Trinick, & Fairhall, 2007; Runesson, 2005; Setati & Adler, 2001.

9. Ngā tikanga whakamahi me ngā tohu

Ko tā te kaiako tōtika he āta whiriwhiri i ngā tikanga whakamahi me ngā tohu hei tautoko i te whakaaro o te ākonga.

Tā te rangahau

He whānui te whiriwhiri a ngā kaiako tōtika i ngā tohu me ngā tikanga whakamahi hei whakapakari i ngā tikanga pāngarau o ā rātou ākonga. Koia ēnei ko te pūnaha tau tonu, ko ngā tohu taurangi, ko ngā kauwhata, ko ngā hoahoa, ko ngā tauira, ko ngā whārite, ko te reo tohu, ko ngā whakaahua, ko ngā tairitenga, ko ngā kupu whakarite, ko ngā pakiwaitara, ko ngā pukapuka mahi, tae atu hoki ki ngā tikanga hangarau. Mā ngā tikanga whakamahi pēnei e puta mai ai ngā āhuatanga o te whakaatu, o te whakawhiti kōrero, o te whakahoki mahara, o te tautohetohe hoki. Ka tino whaihua ai ngā tikanga whakamahi nei ina tangata whenua ai i roto i te whakaaro pāngarau o te ākonga, ka kore e kitea ā-rāwahotia nei. Ka whaimana haere, ka whai hua hoki ēnei tikanga hei toko ake anō i te ako.

He tikanga whakaaro, he tikanga whakamahi

Me āta whiriwhiri ngā kaiako i ngā tikanga whakamahi kia tika ai te mahi, mā konei e whai whakaaro tōtika ai ngā ākonga ki te whakariterite i ngā take pāngarau, e mārama ai hoki ō rātou hinengaro ki aua take. Mā te kōwhiri i te tikanga whakamahi e rite ana, ka taea e te ākonga te rapanga te whakaaro, te whakamātautau rānei kua whakaarahia e te kaiako. Hei tauira, ka whakatūria te whata ngahuru hei āwhina i te ākonga kia kite ā-whatu nei i ngā hononga tau (arā, te tata, te tawhiti rānei o te tau i te ngahuru), te wāwāhinga rānei o te tau.

Ka āta whakaritea e ngā kaiako tōtika ngā tikanga whakamahi, arā, ngā tikanga toka kua oti kē te whakarite mai pēnei i te rārangi tau, te whata ngahuru rānei, kia mārama ai ngā ākonga ki ngā tikanga pāngarau o roto. Ka whakamāramahia atu me pēhea te whakamahi i te tauira, me pēhea hoki te whakaatu i ngā whakaaro e kōrerotia ana, me pēhea hoki te here atu ki ngā kaupapa mahi, ki ngā kaupapa whakaaro, me ngā whakaaturanga ā-tohu.

Te whakawhitiwhiti whakaaro mā ngā tikanga whakamahi

He hua anō ō te tikanga whakamahi, ā-whakaatu, ā-kēhua raweke hoki, hei whakawhitiwhiti i ngā whakaaro me uua kē kia whakamāramatia, kia kōrerotia, kia tuhia rānei. Ehara i te mea kua hangaia kētia ngā tikanga whakamahi; mōhio tonu ngā kaiako tōtika, he hua anō ō te ākongā e whakarite ana, e whakaatu ana i āna ake, ahakoa reo tohu hanga noa nei, kauwhata, whakaahua, tūtohi, āhuahanga rānei. Hei tauira atu, tērā e mātua whakaatu ai te ākongā i ngā raraunga tau ki tāna i waihanga ai i mua noa atu i te whai i ngā tikanga whakamahi tūturu hei whakaatu. Ka whai haere ngā ākongā i ngā tikanga whakamahi hei whakapuaki i ō rātou whakaaro, ka whakapakaritia kia mārāma rawa aua whakaaro, waihoki ka mau i ngā kaiako te ngako o ō rātou nā whakaaro.

Kāti, ko tā te kōrero i raro nei he tohu i te whakaritenga a te kaiako o te akomanga rūmaki reo Māori kia mārāma ai te tikanga o te wehenga mā te whakaaturanga a te tamaiti i te tohatohanga i ngā kai 18 putunga ki ngā tāngata tokoono.

Ka whakaritea mai e te tamaiti nei kia toru ngā rōpū, e ono ki ia rōpū, mahue kē ko tā te kaiako hiahia ai, arā, kia ono ngā rōpū, e toru ki ia rōpū.

T: Tekau mā waru nērā? E hia kei mua i a koe? Me kaute, tahi, rua, toru, whā, rima, ono, whitu, waru, iwa, tekau, mā tahi, mā rua, mā toru, mā whā, mā rima, mā ono, anā kāti ēnā. Anā, e hia ngā kai mō ia tāngata? E hia, hei aha te tiro tiro haere?

Ākonga: Pīrangi tētahi.

T: Kua tuhia e koutou te mahi whakawehe i raro iho.

Ākonga: Kāo.

T: Tangohia te aha wehe aha kei mua i a koe o whakautu.

Ākonga: Ono.

Ākonga: Āe.

T: Aua. Mahia tahi, rua, toru, whā, rima tokorima noa ngā tāngata, tokoono nērā. Nō reira, i te hiahia koe kia hoatu ngā kai ki ia tangata, kua mahia e koe tēnā.

Ākonga: Kāo.

T: Kāo. Nō reira, nā, kua pau te katoa o ngā kai. Kua hoatu e koe te kai ki ia tangata, ka pai, ka pai mēnā kua mahia [te hoihoi reo ākonga] ka pai. Pēhea koe e mōhio ai? Kei te tika koe?

Ākonga: Kaute.

T: Āe. I kaute, koe. Whakarongo. He ōrite ngā kai mō ia tangata?

Ākonga: Whakawehe ... pou rua (?). Tahi, e toru, tahi.

T: Ka pai.

Ka kite ana te kaiako i ngā whakaritenga tatau a te ākonga i ana rōpū, ka whakamōhiohia atu me tokoono tāngata, me ono rōpū hoki te whakaaturanga mai. Ka whakarōpūhia anō e te ākonga kia ono ngā rōpū, ka pātai ia ki te ākonga me pēhea ā muri atu. Heoi hei whakautu i te kīnga mai a te ākonga me kaute ia, ka kaha whakamōhiohia atu e te kaiako tērā e rite ai te rahi o ia rōpū, ki te rite anō te kai a ia tangata. Ka whai wāhi mai ētahi atu ākonga o te akomanga ki te kōrero mō te take nei. Ka hua ake i tēnei whakawhitinga kōrero te hononga i waenganui i ngā wāhanga o te rapanga, tōna whakatakotoranga, tōna whakaaturanga hoki. Ka whakaarahia ake anō tēnei tūhononga i ngā akoranga o muri mai ina whakaaturia ā-tohua ai te rapanga.

Nā Meaney, Fairhall, & Trinick (2007, p. 25)

Ngā hangarau hou

Kei te nui haere ngā momo taputapu hangarau hou e puta mai ana hei raweke i ngā akomanga pāngarau. Arā kē ngā pūmanawa tātaitai, rorohiko hoki, ngā tikanga hangarau whakaatu pēnei i te papatuhi pāhekoheko, ngā taputapu hangarau kawē pēnei i te ngoto ine me te kairarau, tae atu ki te ipurangi. Kei whea mai te pai o te hangarau hou, o ngā huarahi hou, o ngā mōhiotanga hou hei whāwhā atu mā te kaiako me te ākongā hei whakaatu i te kauwhata, i te tau, i te whakaahua o ngā kaupapa pāngarau.

Ko te hua o te hangarau, ina aratakina ai e te kaiako, ko te tautoko i te wānanga takitahi, i te wānanga ngātahi hoki kia tū ai he whare kōrero. Ko tā ngā taputapu hangarau nei he tūhono i te ākongā ki te ao kikokiko ina whakamahia ai ki te rangahau, ki te whakatauirā i ngā tikanga pāngarau, ā, mā tēnei e whai pānga ai, e whai hua ai te ākongā ki te whare pāngarau.

Me mārāma te whakatau a ngā kaiako ki hea whakamahia ai, pēhea hoki te whakamahi i ngā taputapu hangarau hei tautoko i te ako. Noho tahi ai, kōrero tahi ai te kaiako tōtika i ngā take o ēnei whakatau ki ngā ākongā; ko tā te kaiako hoki he whakamātautau i tāna ake whai i te hangarau (te nui, te iti rānei o te whakamahia). E tere huri ana te ao, heoi, me whakangungu tonu te kaiako ki ngā kaupapa whakapakari kia taea e ia ngā tikanga hou te raweke hei whakarangatira ake i ngā whakaaro pāngarau o āna ākongā.

Ngā whakapuakanga: Meaney, Fairhall, & Trinick, 2007; Thomas & Chinnappan, 2008; Zevenbergen & Lerman, 2008.

10. Te mōhio o te kaiako

Ko tā te kaiako tōtika he tiki atu i ngā kete whaimana o te wānanga hei pārekereke mō te ako, hei whāngai i te pāngarau e ngata ai te hiahia o ā rātou ākongā katoa.

Tā te rangahau

Kei te mōhio tanga, kei te whakapono anō o ngā kaiako te tikanga whakarite i ā rātou akoranga, otirā kei ō rātou mōhio anō ki te ako pāngarau. Me whai mōhio tanga rātou kia wawe te kite atu i ngā āhuatanga hei whakaako mā rātou ina tūpono atu ai, ā, ka whāia kia whakaakona. Mēnā e mārama whānui ana rātou ki te tikanga pāngarau, ka whakawhataina ake hei kaupapa tika te here tukutuku, nā whai anō rātou e mārama ai, e taea hoki ngā tini whakaaro ākongā te whakariterite. Mā te mōhio rawa ki te kete pāngarau, ki te wānanga pāngarau hoki e taea ai e ngā kaiako ngā ākongā te āwhina atu kia kāinga ai te pāngarau ki te whakaaro.

Te kete mātauranga a te kaiako

He mātau ngā kaiako tōtika ki tō rātou kaupapa, he mātau hoki ki te whakaako. Kei te mōhio ngā whakaaro nui o ā rātou kaupapa, ā, he aha hoki ngā take hei whakaako atu. Koia tonu rātou mō te whai whakaaro, mō te whakaatu, mō te whakatauirā, mō te kōrero whakarite i te pāngarau hei whakapakari i ngā whakaaro o ngā ākongā. Ko tā rātou anō he āta aromātai i ngā whiriwhiringa, i ngā otinga, i ngā māramatanga o ngā ākongā kia whai wāhi ai rātou ki te hāpai, ki te whakautuutu hei āwhina i ngā ākongā. Kei te kitea e rātou te pito mata o te hua o ngā ngohe e whakaritea ana; heoi mā tēnei e tōtika ai ā rātou whakaritenga hei tohutohu.

Te kete wānanga a te kaiako

He mea nui whakahirahira te mōhio ki te kete wānanga pāngarau, ōna taumata katoa, ki ōna rōpū ākongā katoa. Ki te tino mātau te kaiako, mārama ana ki a ia me pēhea te whakarite te ara pūkenga kia pakari ai te ahu whakamua, ā, me pēhea hoki te tohe kia eke ai ngā whakaaro o te ākongā ki te tāpuhipuhi o wānanga. Ka noho ko te mātauranga o te kaiako hei papa kōwhiriwhiri i ngā tini whakatau mō ngā ngohe, mō ngā rauemi akomanga, mō ngā kōrero, mō ngā mahi hoki e whāngai

ana, e puta ana rānei i te tikanga o te ako. Ki te kore e tino mātau nei te kaiako, ka whai kē te whakaako, te ako hoki i ngā tikanga tūwehe noa, mahue kē te whakahonohono i ngā pou o te whare pāngarau, ngā tika, ngā whakaaro, ngā hanganga, ngā whakaritenga hoki.

Ki te whaihua te whakaako pāngarau, me mātua mōhio ngā kaiako ki ngā ākongā hei ākongā tonu. Mā te mārama pēnei, ka mārama anō hoki rātou ki ngā whakaaro tika me ngā pōhēhētanga. Nā whai anō ka whakaritea ai ngā tohutohu ako hei whakapakari ake i te māramatanga ki ngā tikanga pāngarau.

Ina te mātauranga o te kaiako

E whakaatu ana te kōrero i raro nei, mā te hua o te mātauranga o te kaiako, ka āhei ia ki te whakarongo, ki te āta pātai hoki kia whai hua ai ana whiriwhiringa i roto i te akomanga i te wā e wera tonu ana te take.

Ka tonu te kaiako kia tiroirohia ngā tau raro e tana akomanga
Tau 1 – 2.

Ā: Rima ō-raro tāpiri ki te rima ō-raro ka puta ko te rima ō-raro.

Kaiako: Kāo, i te mea kei te tāpirihia te rima ō-raro ki te rima ō-raro, me tīmata i te rima ō-raro, ā, e hia ō pekenga?

Ā: E rima.

Kaiako: A tēnā, kāore koe e tae atu ki te rima ō-raro (ka tuhia atu ki te rima ō-raro i te rārangi tau). Nā, ka rima ō-raro. E hia ō pekenga?

Ā: E rima.

Kaiako: Nā ka mutu atu koe ki hea?

Nā Fraivillig, Murphy, and Fuson (1999, p. 161)

Mārama pai ana tērā te kitenga atu a te hunga kaiako mātau, pēnei i tēnei kaiako, i ngā kapo huanga o te wā. Otirā, ina kitea ai, me tō rātou mōhio ki te tikanga pāngarau, ki te whakaako anō hoki, ka whakaritea, ka kōwhiriwhiria te whakaako kia mau i te ākongā te hua o te ako.

Te whakarākei i te mātauranga o te kaiako

He whare maire tū ki roto i te pā tūwatawata, he tohu nō te rangatira; he whare whakapakari tū i roto i te pā mātauranga o te iwi, he tohu nō te kaiako. Kō ōna pou he rauemi, he tikanga, he tāngata, he manaakitanga anō hei toko ake, hei pou ngātahi ake mā ngāi pāngarau ki te tāhūnui o te whare pāngarau, heoi mā ngā poutokopakari rawa

e puta ake ai ki te whai ao, ki te ao mārama o te rangi pāngarau e tū iho nei.

Ngā whakapuakanga: Askew, Brown, Rhodes, Johnson, & Wiliam, 1997; Hill, Rowan, & Ball, 2005; Schifter, 2001.

Hei whakakapi

E ai ki ngā kōrero rangahau o ēnei rā, kei te āhuetanga o te whakaako pāngarau te mana e whai hua ai te ako o te ākongā. Nā tēnei ka tino whai tikanga te whakaako a te kaiako e mauriora ai te tikanga pāngarau o te ākongā. Tekau ngā mātāpono o te pukapuka nei hei take kōrero mō te whakahuri, mō te whakaaauaha, mō te whakahou anō hoki. Me whai ngātahi atu i ngā mātāpono nei, kua e whakawehe: he mahi whīwhiwhi te whakaako, ina anō ngā tini āhuetanga kua rarangahia hei whakaaro mō te ako o te ākongā. Ko tā te pukapuka nei he whakatakoto huarahi hei wetewete i te whīwhiwhitanga o te mahi, e whai hua ai te whakaako pāngarau.

Mā te raranga tahi o ngā mahi o te katoa: arā, ngā kaiako, ngā tumuaki, ngā kaiwhakaako kaiako, ngā kairangahau, ngā mātua, ngā poutoko whāiti, ngā poari kura, ngā kaituhi kaupapa here, tae atu hoki ki ngā ākongā; e whakapakari ana i ngā tikanga pāngarau o ngā ākongā, e tino whai hua ai te mahi auaha, e tōtika rawa ai te whakahou kaupapa. Me whiriwhiri ngā whakarerekētanga, me whakaputa hoki ki ngā akomanga, ki ngā rōpū, ki ngā tari, ki ngā kura, ki ngā kaupapa whakaako kaiako hoki. Me whāngai ngā kaupapa auaha, whakahou hoki. Me mātua whakarite ngā kura, ngā hapori, te motu anō hoki kia whai mātauranga ai ngā kaiako, kia whai pūkenga, kia whai rauemi, kia whai minakatanga anō e tino rangatira ai te ako o ngā ākongā. Mā konei e whai mātauranga katoa ai ngā ākongā ki ngā taumata o te pāngarau. Mā konei anō e whai mana ai rātou katoa hei pia, hei tauira, hei tāura i te whare pāngarau.

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TE WHARE MĀTAURANGA O TE AO – IBE

I whakatūria te IBE i Geneva, Switzerland hei mana motuhake, kāore nei he herenga kāwanatanga, i te tau 1925. Nō te tau 1929 ka tū ko ia te rōpū tuatahi hei mana tuitui kāwanatanga i te ao mātauranga. Heoi, mai i te tau 1969 kua toka tana noho i UNESCO engari he mana motuhake anō tōna hei whai mātauranga, whai mahi anō hoki.

Ko te kaupapa tonu o te IBE he tumu herenga mō te whakatipu i ngā kōrero me ngā tikanga mahi o te mātauranga. Ko tāna mahi he tuitui i ngā hua wānanga, he whakapakari hoki i ngā tikanga wānanga o ngā whenua hei āhuatanga whakataka marautanga i ngā rohe o te ao. Ko tōna whāinga he whakahou i ngā mahi marautanga, te huahuatanga, te whakahaeretanga hoki, he whakakaha ake i ngā pūkenga mahi ā-ringa nei, he āwhina i ngā āhuatanga whakawhitihiti kōrero i te ao mō ngā kaupapa here o te mātauranga.

Ko tā te IBE he whakamātautau i te kōunga o te kaupapa, Kia Mau Te Katoa i Te Mātauranga (EFA): (a) mā te whakarite kaupapa whiriwhiri hei tūhonohono i te ao, mā te whakawhāiti hoki i ngā tohunga o ngā momo marautanga ki te mahi; (b) mā te āwhina ā-tohutohu, ā-hangarau hoki hei whakaea i ngā tono kia whakatikaina, kia whakatipuria rānei te marautanga; (c) mā te kohikohi, mā te whakaputa, mā te whai i ngā momo rauemi, taputapu kōrero hoki mō ngā kaupapa, mō ngā marautanga me ngā whakaritenga mō te whakatipu marautanga mō te mātauranga puta noa i te ao, arā, ngā pātaka kōrero o te whare ipurangi (pērā i Ngā Raraunga o Te Ao mō Te Mātauranga), ngā wānanga whakaaro, ngā putanga pukapuka (pērā i Ngā Aronga – Te Arotakenga Hauwhā o Te Mātauranga), ngā pūrongo ā-motu, tae atu hoki ki ngā rauemi me ngā whakaritenga marautanga mō te mātauranga HIV & AIDS i te kura tuatahi, tuarua anō i ahu mai i Te Whare Whakaputa Kōrero HIV & AIDS; (d) mā te whakarite, mā te tautoko hoki i ngā whakawhitinga kōrero o te ao mō ngā kaupapa here, ngā rautaki me ngā whakahounga o te mātauranga i waenganui i te hunga whakatau take me ētahi atu e whai pānga ana, otirā mā roto i Te Hui Wānanga Mātauranga o Te Ao – kua whakahaeretia nei e IBE mai anō i te tau 1934 – kua kīa ai koinei te whare kōrero matua hei whakatakoto i ngā kaupapa here o te ao i waenganui i ngā Minita o Te Mātauranga.

He Rūnanga te kaitiaki o IBE, rua tekau mā waru ōna māngai kōrero o ngā Whenua Whaimana i pōtitia ai e Te Rūnanga Matua o UNESCO. Whakahihī pai ana a IBE ki te whai pānga atu ki ngā mahi a Te Wānanga Mātauranga o Te Ao, ā, koinei tonu te mahi a Te Whare Whakaputa Kōrero, he tā i ngā kōrero nei, he āwhina i te kaupapa whakawhiti i ngā kōrero mō ngā kaupapa mātauranga.

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